

March 9, 2022

BY ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket 5210 - Proposed FY 2023 Gas Infrastructure, Safety and Reliability Plan Responses to PUC Data Requests – Set 2 (Complete Set)

Dear Ms. Massaro:

I have enclosed the electronic version of National Grid's¹ complete set of its responses to the Public Utilities Commission's ("PUC") Second Set of Data Requests in the above-referenced matter.²

The Company submitted two separate batches of its responses to PUC Set 2. The first batch was submitted on February 17 and the second batch on February 18. The Company is providing this complete set of its responses for posting to the PUC's website.

Thank you for your attention to this matter. If you have any questions, please contact me at 781-472-0531.

Very truly yours,



Raquel J. Webster

Enclosures

cc: Docket 5210 Service List
Leo Wold, Esq.
Al Mancini, Division
John Bell, Division
Rod Walker, Division

¹ The Narragansett Electric Company d/b/a National Grid.

² Per a communication from Commission counsel on October 4, 2021, the Company is submitting an electronic version of this filing followed by six (6) hard copies filed with the Clerk within 24 hours of the electronic filing.

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

Joanne M. Scanlon

March 9, 2022

Date

Docket No. 5210 - National Grid's FY 2023 Gas Infrastructure, Safety and Reliability (ISR) Plan - Service List 12/22/2021

Name/Address	E-mail Distribution	Phone
Raquel J. Webster, Esq. National Grid 40 Sylvan Road Waltham, MA 02451	raquel.webster@nationalgrid.com ;	781-907-2121
	celia.obrien@nationalgrid.com ;	
	Joanne.scanlon@nationalgrid.com ;	
	Jennifer.Hutchinson@nationalgrid.com ;	
National Grid Amy Smith Melissa Little Lee Gresham Ryan Scheib	Amy.smith@nationalgrid.com ;	
	Melissa.Little@nationalgrid.com ;	
	mei.sun@nationalgrid.com ;	
	Theresa.Burns@nationalgrid.com ;	
	Michael.Pini@nationalgrid.com ;	
	Nathan.Kocon@nationalgrid.com ;	
Division of Public Utilities & Carriers Leo Wold, Esq.	Leo.Wold@dpuc.ri.gov ;	401-780-2130
	Margaret.l.hogan@dpuc.ri.gov ;	
	Al.mancini@dpuc.ri.gov ;	
	John.bell@dpuc.ri.gov ;	
	Linda.george@dpuc.ri.gov ;	
	Robert.Bailey@dpuc.ri.gov ;	
	eullucci@riag.ri.gov ;	
MFolcarelli@riag.ri.gov ;		
Rod Walter, CEO/President Rod Walker & Associates	Rwalker@RWalkerConsultancy.com ;	706-244-0894
File an original and five copies Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Blvd. Warwick RI 02888	Luly.massaro@puc.ri.gov ;	401-780-2107
	Patricia.lucarelli@puc.ri.gov ;	
	Todd.bianco@puc.ri.gov ;	
	Alan.nault@puc.ri.gov ;	
PPL Electric Utilities	rjreybitz@pplweb.com ;	

Ronald Reybitz
Stephen Breininger

skbreininger@pplweb.com

PUC 2-1
General

Request:

Is there a formal difference between “gate” stations and “take” stations on the RI distribution system?

Response:

No, “gate” station and “take” station can be used interchangeably to indicate a metered custody transfer station.

PUC 2-2
General

Request:

Regarding the text on Bates 54, what is a “guaranteed street” in the context of the state or local jurisdiction?

Response:

A guaranteed street is one for which the municipal or state permitting department will not grant a new permit because the street has recently been reconstructed, repaved, or otherwise resurfaced. Typically, streets enter guaranteed status for as few as 5 and up to 10 years.

The Narragansett Electric Company
d/b/a National Grid
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PUC 2-3
General

Request:

To the extent that the information is available, what is the expected service life of the assets or groups of assets proposed in the FY23 ISR, and what is the amortization period (please provide the response in a table if there is significantly detailed data responsive to this request).

Response:

Refer to the chart below, Column (a) and (b) present the major accounts of the FY23 Gas ISR Plant in Service. Based on the amended settlement agreement in Docket 4770, Column (c) represents the expected service life of the assets, Column (d) represents the annual depreciation rate as a percentage of original book cost, and Column (e) reflects the resulting amortization periods of the approved Cost Depreciation Rates of the major accounts from Column (d).

Line No	Plant Account	Account Description	Expected Service Life (Years)	Current Annual Book Cost Depreciation Rate	Cost Amortization Period (Years)
	(a)	(b)	(c)	(d)	(e)=1/(d)
1	361	Storage Structures and Improvements	50	0.90%	111
2	375	Structures and Improvements	60	0.96%	104
3	376	Mains	60	1.68%	60
4	378	Measuring and Regulating Station - General	50	1.73%	58
5	379	Measuring and Regulating Station - City Gate	50	1.85%	54
6	380	Services	50	1.77%	56
7	381	Meters	40	1.68%	60
8	383	House Regulators	40	0.67%	149
9	384	House Regulators Installations	40	1.56%	64
10	394	Tools and Equipment	20	5.0%	20

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PUC 2-4
General

Request:

How, if at all, has National Grid incorporated the requirements of the Act on Climate in the FY23 ISR Plan?

Response:

The most immediate requirement of the 2021 Act on Climate is directed to the Rhode Island Executive Climate Change Coordinating Council (“EC4”) to file an updated plan by December 31, 2022, that “includes strategies, programs, and actions to meet economywide enforceable targets for greenhouse gas emissions reductions.” (See R.I. Gen. Laws §§ 42-6.2-2(a)(2)(i), (viii), and 42-6.2-3). The 2021 Act on Climate does not place any requirements on public utilities with which they must comply at this time; therefore, it is too soon to know how future rules and regulations implementing the new targets under the 2021 Act on Climate will implicate the utility sector. For these reasons, the FY 2023 ISR Plan does not incorporate any of the requirements of the 2021 Act on Climate.

PUC 2-5
Main replacement

Request:

On Bates 11 and Bates 36 of the filing, the testimony and Plan list five pieces of work planned “resulting in the abandonment target of approximately 64.5 miles for FY 2023...” Please show more clearly how the list referenced results in 64.5 miles.

Response:

The table below provides a summary of the planned leak prone pipe abandonment by category, which totals approximately 64.5 miles. Additional summary information related to FY 2023 budgets and planned installation miles for these categories are included on bates page 69 (Section 2, Table 1).

Category	Target Abandonment
Public Works	14.00
Low Pressure System Elimination (Proactive)	0.06
Main Replacement (Proactive) – Large Diameter LPCI Program	49.11
Atwells Avenue	0.27
Gas System Reliability	0.08
Reinforcement Projects	1.00
Total	64.52

PUC 2-6
Main replacement

Request:

Why is the abandonment target share of cast iron mains set for 70% rather than a higher number—for example, one more aligned with the share of leak receipts from cast iron mains?

Response:

There are many variables that factor into the cast iron vs. steel abandonment target share. Cast iron work tends to be located in urban areas, and many of the highest priority ranking cast iron projects are located in a select handful of municipalities (mainly the City of Providence). Because of the challenges working in urban locations presents (underground utility congestion, dense service population, etc.), these projects tend to have higher costs associated with them and are a bigger draw on Company resources. Obtaining permits can also be an issue if too much work is proposed in a certain municipality in a given year. In order to craft a workplan mix that prioritizes risk associated with leak prone pipe, but also allows the proposed abandonment mileage and budget targets to be met, while spreading the work out geographically to ease any resource and permitting concerns, the steel abandonment target share is adjusted accordingly.

PUC 2-7
Main replacement

Request:

Regarding the testimony and tables on Bates 15 and 16, what is primarily causing the increase of cost/mile in urban and suburban areas to be greater than the increase in cost/mile in rural areas?

Response:

The cost per mile of main replacement work in urban areas, and to a lesser degree, suburban areas, is more expensive due to several factors, including:

- higher density of services per mile;
- larger number of connections per mile;
- restrictions on working hours that reduce efficiency;
- more complicated Traffic Management Plans, often requiring more flagging resources;
- and
- higher density of existing underground services requiring additional time and resources to install new pipe through and around those services.

Targeting more cast iron pipe in the urban and suburban areas has resulted in higher year-to-year cost increases as many of these communities are more likely to impose restrictions and are expanding their surface-level paving requirements. These factors can contribute to disproportionate cost increases between the three groups.

PUC 2-8
Main replacement

Request:

Referencing Table 2 on Bates 70, why is National Grid forecasting an increase in spending on main replacement by almost 30% in FY24?

Response:

The Large Diameter \geq 16 Inch program is increasing from \$2.9 million to \$8.5 million to fund higher investment in lining projects. The remaining increase is associated with the Main Replacement $<$ 16 Inch program. FY23 funding for this program includes 39.9 install miles plus 10 miles of carryover (or in progress) at reduced cost to achieve 49.9 miles of abandonment (includes 70% cast iron). The FY24 plan includes 54.5 miles of installation, none of which are carried over at a reduced cost, to achieve 54.5 miles of abandonment. Eighty percent of the targeted miles are cast iron mains, which tend to be located in urban areas resulting in higher costs per mile.

PUC 2-9
Service Replacement

Request:

What is the main driver of increased spending from FY22 to FY23 in the Proactive Service Replacement Program?

Response:

The FY23 budget for the Proactive Service Replacement Program recognizes the full actual cost of this program as compared to previous budgets. The initial unit cost estimate for the completion of units in this program was low by nearly a factor of 2. The full cost of this program is only being recognized in its third year because service replacements completed in year one did not undergo final restoration (paving) until the second year.

PUC 2-10
**Wampanoag Trail and Tiverton Gate State Heaters
Replacement and Ownership Transfer**

Request:

Please confirm The Narragansett Electric Company (TNEC) will own the facilities after the transfer.

Response:

The Narragansett Electric Company (Company) confirms that it will own the pressure regulation and heating facilities at the Tiverton Gate Station on Main Rd in Tiverton, RI after the transfer. As of the completion of the Wampanoag Trail heater project, the Company will only own the heating facilities and the overpressure protection valves at the East Providence Gate Station on Wampanoag Trail, RI.

PUC 2-11
**Wampanoag Trail and Tiverton Gate State Heaters
Replacement and Ownership Transfer**

Request:

Regarding the qualitative benefits presented in the Plan beginning on Bates 58, please relist the bullets organized by which can be achieved solely through replacement and which National Grid believe can only be achieved by transfer of ownership.

Response:

Facility Replacement Benefits:

Both Locations:

- Enhancement of heating system reliability at both locations by installing fully redundant heating systems.
- Allowance of heater maintenance and repairs without station shutdown or heater bypass improves overall gate station reliability.

Tiverton Station Replacement:

- Reduction in overpressure risk by installation of three levels of overpressure protection and reliable heat.

Wampanoag Trail Heaters:

- Improvement of heater efficiency and reduction of risks associated with Gas System Operator ("GSO") changing flows through the station by providing the Company with the ability to control Wampanoag Trail Heater setpoints with its modern Programmable Logic Controller ("PLC") system.
- Reduction of the potential for overheated gas which may melt regulator soft goods by installing Company Safety Integrity Level ("SIL") certified heater safety system.

Ownership Transfer Benefits:

Both Locations:

- Creation of verifiable inspection and maintenance records for the new assets.
- Reduction in dependency on the pipeline operators to operate and maintain safety critical equipment.

PUC 2-11, page 2
**Wampanoag Trail and Tiverton Gate State Heaters
Replacement and Ownership Transfer**

Tiverton Station Replacement:

- Allowance for a greater level of proactive station maintenance that the Company will perform, including annual regulator boot replacement and monthly station checks, which will greatly mitigate outage risk of the single feed system.

Wampanoag Trail Heaters:

- Improvement of heater efficiency and reduction of risks associated with Gas System Operator (“GSO”) changing flows through the station by providing the Company with the ability to control Wampanoag Trail Heater setpoints with its modern Programmable Logic Controller (“PLC”) system (**benefit of both replacement and ownership transfer**).

PUC 2-12
**Wampanoag Trail and Tiverton Gate State Heaters
Replacement and Ownership Transfer**

Request:

Absent the transfer of ownership, would a different facility, or no facility at all, be constructed?

Response:

The Company would not construct its own heating facilities at either location because it does not own the property or a connection point to the inlet pipe where new heater facilities would be required. At Tiverton, a new pressure regulation facility would not be constructed because the Company currently receives gas at distribution pressure. The transmission pipeline operator has indicated a willingness to replace assets but with different design standards absent an ownership transfer to and reimbursement from the Company. However, the Company cannot confirm the business decisions the transmission pipeline operator would make.

PUC 2-13
**Wampanoag Trail and Tiverton Gate State Heaters
Replacement and Ownership Transfer**

Request:

Absent a transfer of ownership, how would revenue to support the construction, operation, maintenance, etc. of the facility be collected?

Response:

Absent a transfer of ownership, cost for this work would be reflected in the firm capacity rate billed to National Grid by Enbridge. The Company notes that Enbridge's firm capacity rates are set by the Federal Energy Regulatory Commission ("FERC"). The revenue to support the construction, operation and maintenance of the facility would be collected from the Company's sales customers through the gas cost recovery factor approved by the PUC.

PUC 2-14
**Wampanoag Trail and Tiverton Gate State Heaters Replacement
and Ownership Transfer**

Request:

What is the expected service life of the stations, and over what time period will they be in rates?

Response:

The expected service life of a gate stations and gate station equipment, which includes heaters, is listed as 50 years although individual subcomponents may have a shorter service life. However, the useful life of heating systems is generally closer to 25 years due to obsolescence, capacity requirements and new codes and standards. Based on currently approved annual depreciation rates of 2.08% and 2.22% respectively, gate stations would be in rates for a period of approximately 48 years from their in-service date, gate station equipment including heaters would be in rates for a period of approximately 45 years from its in-service date.

PUC 2-15
**Wampanoag Trail and Tiverton Gate State Heaters
Replacement and Ownership Transfer**

Request:

In developing the proposal to transfer ownership of the take stations, did National Grid consider the requirements of Act on Climate (R.I. Gen Laws § 42-6.2) and any risk that the facilities may become obsolete before they are fully depreciated?

Response:

National Grid shares the State's goals of reducing emissions and is actively developing strategies for a cleaner energy future for Rhode Island. The most immediate requirement of the 2021 Act on Climate is directed to the Rhode Island Executive Climate Change Coordinating Council ("EC4") to file an updated plan by December 31, 2022, that "includes strategies, programs, and actions to meet economywide enforceable targets for greenhouse gas emissions reductions;" (See R.I. Gen. Laws §§ 42-6.2-2(a)(2)(i), (viii), and 42-6.2-3). The 2021 Act on Climate does not place any requirements on public utilities with which they must comply at this time; therefore, it is unknown how future rules and regulations implementing the new targets under the 2021 Act on Climate will implicate the utility sector.

Currently, customer interest in using natural gas continues and until such time as utility requirements are set and the timeline for achieving those requirements has been determined, National Grid has proposed projects, programs, and transfers of asset ownership that will maintain the safety and reliability of the Company's gas system. The Company understands that the possibility for stranded investment exists and believes that this is a pertinent issue for consideration in a rate case where depreciation rates are proposed, and where the Company's future gas expansion capital additions are reviewed.

PUC 2-16
**Wampanoag Trail and Tiverton Gate State Heaters
Replacement and Ownership Transfer**

Request:

On Bates 23, the witnesses say a benefit related to the Tiverton Gate Station project is “Allowance for greater level of proactive station maintenance that the Company will perform, including annual regulator boot replacement and monthly station checks. This will greatly mitigate outage risk of the single feed system.”

- a. Does National Grid know Enbridge’s schedule for station checks and regulator boot replacement absent the transfer of ownership? If so, how does it differ from National Grid’s schedule.
- b. Does National Grid believe Enbridge’s schedule for station check and regulator boot replacement would be too high-risk, imprudent, or unreasonable?
- c. If the frequency of station maintenance and inspections are affected by who owns the facility, how can the PUC be assured that the increased frequency gained by the proposed transfer of ownership will persist should the sale of TNEC to PPL be approved? In other words, is there risk that PPL would implement an inspection and maintenance protocol similar to Enbridge’s thereby reducing the purported benefits?

Response:

- a. Enbridge performs annual regulator inspection and testing, but the Company does not know if Enbridge has a similar proactive boot replacement program. The Company replaces boot regulators at its regulator stations every seven years and annually at its Take Stations. The Company does not have insight regarding Enbridge maintenance practices and cannot provide a comparison of the two. Transfer of ownership of the facilities enables ownership of the operation and maintenance of the facilities.
- b. Enbridge is required to operate and maintain its facilities according to federal pipeline regulations. However, that does not necessarily translate to prudent operation of the Company’s facilities. Transfer of ownership puts the responsibility for, and control of, prudent operation and maintenance of the protective devices under the responsibility of the owner of the downstream distribution facilities, which provides for consistency in operation and maintenance practices.
- c. Operations personnel selected from National Grid to lead PPL’s instrumentation and regulation operations have committed to follow the current regulator station inspection and maintenance protocols.

PUC 2-17
**Wampanoag Trail and Tiverton Gate State Heaters
Replacement and Ownership Transfer**

Request:

On Bates 59, National Grids list the following qualitative benefits at both take stations: “Creation of verifiable inspection and maintenance records for the new assets,” and “Reduction in dependency on the pipeline operators to operate and maintain safety critical equipment.”

Response:

On February 16, 2022, the PUC re-issued this data request as PUC 4-1. Please see the Company's response to PUC 4-1.

PUC 2-18
Mandated Programs

Request:

Referencing Tables 2 and 3 on Bates 70 and 71, the proposed spending for Mandated Programs in FY23 is approximately 73% greater than FY17 actual spending, and National Grid forecasts the FY27 spending at approximately 288% above the FY17 actual spending. What has driven the increased in spending in the category to date, and what is driving the increased spending in National Grid’s forecast?

Response:

National Grid plans to execute two specific projects, which contribute to increased Mandated Program spending through FY 2027. These projects are:

- Pipeline Integrity – IVP – Wampanoag Trail Pipeline Replacement
- Transmission Station Integrity – Scott Road Take Station Enhancement

In addition, the Company plans to increase work volumes for the on-going Transmission Station Integrity Program over the next five years and anticipates replacing one station every two years. The Pipeline Integrity – IVP – 200 psig System Replacement Blanket funds projects that may arise following In-Line Inspections (ILI). For example, in FY 2023, an ILI is planned for the Providence River Crossing. If the results indicate that replacement is necessary, the blanket is in place to cover a significant cost of the project while minimizing the impact to the budget.

The IVP work is necessary to upgrade and maintain the Company’s gas system to ensure the safety, reliability and compliance of the gas distribution system and to provide safe and efficient service to customers.

Please see the table below for the increased spending for mandated programs for FY 2023 through FY 2027.

Investment Name	FY 23				
	\$(000's)	FY 24	FY 25	FY 26	FY 27
Pipeline Integrity - IVP - 200 psig system replacement	-	1,000	2,500	5,000	25,000
Pipeline Integrity - IVP - Wampanoag Trail Pipeline Replacement	500	500	5,000	5,000	250
Transmission Station Integrity	1,010	4,685	11,759	5,205	12,234
Transmission Station Integrity - Scott Road Take Station (Cumberland)	3,500	9,000	2,100	-	-
Other Mandated Programs	23,350	24,588	25,080	25,581	26,094
Total	28,359	39,772	46,440	40,787	63,578

PUC 2-19
Public Works

Request:

On Bates 43 of the Plan, National states, “Although one of the primary purposes of Public Works spending is to address direct conflicts between planned third-party projects and existing gas infrastructure, Public Works spending provides the additional opportunity to coordinate other system improvement work, such as the replacement of leak-prone pipe, system reliability upgrades, elimination of redundant main, and regulator station upgrades.” Do all of the projects planned in this category have some direct conflict with other projects that must be addressed, or are some projects merely a coordination in timing with other entities’ street-disturbing projects?

Response:

While most projects under the Public Works program are done due to a direct conflict with third-party activities, some projects under the program are done as a result of an attempt to coordinate timing and save costs on restoration. Project scopes may also be adjusted to include additional work outside of the area in which the third-party activity is occurring, if deemed appropriate based on engineering judgement.

PUC 2-20
Southern RI Gas Expansion Project

Request:

On Bates 24, regarding the Southern RI Gas Expansion Project, the witnesses state. "Without this project, the Company may have needed to impose a moratorium on all new gas service requests and requests for expansion of existing gas service to prevent service interruptions to existing customers."

- a. In what reports or analyses was this condition first identified?
- b. Please list and briefly describe any long-term studies or analyses performed by the Company that identify potential future constraints (e.g., technical scope, timeframe, geographic scope, frequency of updates, etc.).
- c. Do any of the studies or analyses described in response to part b currently identify any potential future constraints like the conditions that motivated the Southern RI Gas Expansion Project?

Response:

- a. The condition was first identified in the five-Year Distribution System Reinforcement & Reliability Plan 2013-2017 dated December 2012.
- b. The long-term studies or analyses performed by the Company that identify potential future constraints are as follows:
 - i. **Annual Five -Year Gas System Reinforcement & Reliability Plan** - Each year the Company performs an analysis utilizing the Synergi network analysis modeling software on the gas distribution system to determine the reinforcement and reliability projects, and associated costs, that need to be constructed to support forecasted customer design day requirements.
 - ii. **Annual Design Peak Hour Tables** - Once the design day sendout requirement is established, the Company converts this sendout to a peak hour based on a 5% peak-hour factor (i.e. the peak hour requirement represents 1/20th of the peak day requirement). The Company's Synergi network analysis modeling software is adjusted with the design peak hour customer requirements to meet the forecast for the three firm customer requirement categories. The Design Peak Hour Tables shows the hourly imbalance at each take station for the five-year forecast period. This analysis identifies when potential portfolio needs may require incremental resources.
- c. No. None of the studies or analyses described in response to part b currently identify any potential future constraints like the conditions that motivated the Southern RI Gas Expansion Project.

PUC 2-21
Southern RI Gas Expansion Project

Request:

Why does the annual spending on this project increase to \$14.12 million in FY25?

Response:

The annual spending on the Southern RI Gas Expansion Project increase to \$14.12 million in FY25 is due to the anticipated schedule of construction extending through FY25. Please see Attachment PUC 2-21 for anticipated activities and forecasted spend for FY25.

Description	Planned Activity/Activities	FY 2025 \$(000)
<i>Regulator Station Investment:</i>		
Cranston Take Station Upgrades	Final construction season	\$ 3,500
Cowesett Regulator Station Upgrades	Complete	\$ -
New Regulator Station North of Cowesett Regulator Station	Project Closeout	\$ 100
New Regulator Station at End of New Main near South Rd	Construction	\$ 5,000
<i>Total - Regulator Station Investment</i>		\$ 8,600
<i>Other Upgrades/Investment:</i>		
Launcher/Receiver	Construction	\$ 5,000
MOP Increase from 150 to 200 psi	Complete	\$ -
Installation of ROV	Construction	\$ 523
<i>Total - Other Investment</i>		\$ 5,523
<i>Total Southern RI Gas Expansion Project</i>		\$ 14,123

PUC 2-22
Southern RI Gas Expansion Project

Request:

How many customers have been connected to the gas system as a result of the Southern RI Gas Expansion Project? How many more customers are expected and when? How do these services compare to National Grid’s expectation when it first proposed to project and identified that “Without this project, the Company may have needed to impose a moratorium on all new gas service requests...” Please respond with class-specific numbers.

Response:

The Southern RI Gas Expansion Project (the “Project”) enabled customers in southern RI to connect to the gas system after April 1, 2019. There are currently 1,599 active customers that have been connected to the gas system since April 1, 2019 in Coventry, Cranston, East Greenwich, Exeter, Kingston, Narragansett, North Kingstown, Richmond, Scituate, South Kingstown, Warwick, West Greenwich, West Kingstown, West Warwick, which were enabled by the Southern RI Gas Expansion Project.

A summary table is included below¹:

	Count of Billing Accounts by Open Date						Grand Total
	2017*	2018*	2019	2020	2021	2022	
Tariff Rate Schedule							
Gas 1012 Res Non Heat		1	8	51	29	1	90
Gas 1101 Res Low Inc Non Heat			1	2			3
Gas 1247 Res Heat	2	3	143	436	613	61	1258
Gas 1301 Res Low Inc Heat		1	5	13	9		28
Gas 2107 C&I Small		3	38	76	67	8	192
Gas 2221 C&I Medium FT2					1		1
Gas 2237 C&I Medium			3	8	8		19
Gas 2367 C&I Large High Load			1				1
Gas 3367 C&I Large Low Load				3	2		5
Gas 3496 C&I Extra Large Low Load			1				1
Gas Company Use			1				1
Grand Total	2	8	201	589	729	70	1599

¹Please note that the 10 billing accounts that were established in 2017 and 2018 did not begin using gas until after April 4, 2019.

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The Company's gas load forecast in 2017Q2 indicated the potential for growth in the southern RI area and, absent the Project, that growth could not have been satisfied. With the Project in service, the Company has been able to support continued development of the southern RI area and sees continued growth in its most recent forecast, higher than the National Grid RI average, and higher than forecast prior to the Project being placed into service.

Please also refer to Attachment 2-22 for a subset of active projects whose gas service was contingent on the completion of the Southern RI Gas Expansion Project.

Southern RI Gas Growth - New/Anticipated Load - Construction Phased Over 15 Mo.													
Load dth/hr	Potential Customer Name	Project	Location	Town	Initial Customer Need Date	Initial Target Date for Capacity Delivery	Economic Driver	Customer Name	Address	Status	Meter Install Date	Account #	Rate
2	Quonset Development Corp. Office Bldg.	New facility	Romano Vineyard Way	Quonset	May-19	Nov-19	New Construction	QUONSET DEVELOPMENT CORP	30 Romano Vineyard Way North Kingstown	North Kingstown	Active	12/31/2020	2107
55	Infinity Meat Solutions (formerly Evergreen)	New facility	Romano Vineyard Way	Quonset	Oct-19	Nov-19	New Construction	Infinity Meat Solutions, LLC	60 COMPASS CIR UNIT ALL	North Kingstown	Active	12/17/2019	3367
3	General Dynamics - Electric Boat- VPM	(323,000 sq. ft.)	Conway Ave	Quonset	Oct-19	Nov-19	New Construction	Electric Boat Corporation	22 CONWAY AVE BLDG ALL	North Kingstown	Active	8/27/2019	2237
12	General Dynamics - Electric Boat- 9A	Adding 2 paint cells	McNaught St	Quonset	Oct-19	Nov-19	New Construction	Electric Boat Corporation	55 CONWAY AVE BLDG ALL	North Kingstown	Active	12/18/2019	3496
6	Wickford Harbor Estates		IDIF Post Rd.	N. Kingstown	Oct-19	Nov-19	New Construction	Wickford Harbor Estates LLC	8061 Post Rd.	North Kingstown	Potential		1247 Residential Subdivision
11	Reynolds Farm Phase 2B	Development		N. Kingstown	Dec-19	Nov-20	New Construction	Green Hill Builders Inc	00 Seawynnds Dr.	North Kingstown	Potential		1247 Residential Subdivision
6	175 Greenbush Rd.	Development	175 Greenbush Rd.	West Warwick	Dec-19	Nov-19	New Construction	Matteson Ridge Limited Partnership	175 GREENBUSH RD	West Warwick	Potential		1247 Residential Condos
5	400 South County Trail	Development	400 South County Trail	Exeter	Feb-20	Nov-19	New Construction				Potential		
25	Finlay's Tea	Manufacturing Fac.	85 Ocean State Dr.	Quonset	Apr-20	Nov-20	New Construction				Not Active		
23	General Dynamics - Electric Boat- 9B	Phase II AFC Bldg	2 Belver Ave	Quonset	Apr-20	Nov-20	New Construction				Active		3496
10	General Dynamics - Coatings 10A			Quonset	May-20	Nov-20	New Construction	Electric Boat Corporation	10A MACNAUGHT ST UNIT BLDG	North Kingstown	Active	6/2/2020	2107
55	Toray Plastics (Toray Fan) (A6 Line)	A6 line install	50 Belver Ave	Quonset	Jun-20	Nov-20	New Construction	TORAY PLASTICS AMERICA IN	50 BELVER AVE	North Kingstown	Active		Load Added to existing meter
79	2900 Kingstown Rd		Kingston	Kingston	Nov-20	Nov-20	New Construction	CLOSED LOST			Not Active		
21	Toray Plastics (Lumirror) (CE-2Line)	CE-2 line install	14 Mainsail Drive	Quonset	Nov-20	Nov-20	Added Load				Active		
8	175 Greenbush Rd.	Development	175 Greenbush Rd.	West Warwick	Dec-20	Nov-20	New Construction				Potential		
4	General Dynamics - AFC II			Quonset	Dec-21	Nov-20	New Construction				Potential		
8	175 Greenbush Rd.	Development	175 Greenbush Rd.	West Warwick	Dec-21	Nov-20	New Construction				Potential		
10	General Dynamics - Coatings 10B			Quonset	Jan-22	Nov-20	New Construction				Active		
8	175 Greenbush Rd.	Development	175 Greenbush Rd.	West Warwick	Dec-22	Nov-20	New Construction				Potential		
41	Toray Plastics (Toray Fan - Co-Gen)	13 MW Co-Gen install	50 Belver Ave	Quonset	Jan-23	Nov-20	New Construction				Potential		
20	Infinity Meat Solutions (formerly Evergreen)	New facility	Romano Vineyard Way	Quonset	Dec-23	Nov-20	New Construction				Potential		
26	Sand Hill Cove Expansion	Expansion	10 Chestnut Ave	Narragansett	Dec-23	Nov-20	Economic Benefit				Potential		
8	175 Greenbush Rd.	Development	175 Greenbush Rd.	West Warwick	Dec-23	Nov-20	New Construction				Potential		
149	JURI Power Plant			S Kingstown	Dec-23	Nov-21	Interruptible to Firm				Potential		
17	General Dynamics - Electric Boat- 9C	(230,000 sq. ft.)	Conway Ave	Quonset	Nov-24	Nov-21	New Construction				Potential	2022	3496
10	General Dynamics - Coatings 10C			Quonset	Feb-25	Nov-21	New Construction				Potential		
4	General Dynamics - Electric Boat- 9D	(158,000 sq. ft.)	Conway Ave	Quonset	Jul-27	Nov-21	New Construction				Potential		
626	General Dynamics - Electric Boat- 9D			Quonset				QUONSET DEVELOPMENT CORP Electric Boat Corporation	50 ROMANOVIENYARD WAY UNIT ALL 10A MACNAUGHT ST UNIT PRES	North Kingstown North Kingstown	Active Active	9/19/2019 5/27/2020	2237 2367

PUC 2-23
Southern RI Gas Expansion Project

Request:

Are new services that are enabled by the Southern RI Gas Expansion Project Included in the annual calculation of the Revenue Decoupling Mechanism? If so, how many customers by class and how did these customers change incremental revenue annually?

Response:

New services enabled by the Southern RI Gas Expansion Project (the “Southern RI Project”) for the Company’s rate classes included in the annual calculation of the Revenue Decoupling Mechanism (“RDM”) in each calendar year (“CY”) through CY 2021 are summarized below:

New Customers Added	2019	2020	2021	Total
Residential Non-Heating	9	51	29	89
Residential Non-Heating LI	1	2	0	3
Residential Heating	148	436	613	1,197
Residential Heating LI	6	13	9	28
Small C&I	41	76	67	184
Medium C&I	3	8	9	20
Total	208	586	727	1,521

Pursuant to R.I.P.U.C. NG-GAS No. 101, at Section 3, Schedule A, Sheet 7, Subpart 3.7 of the Company’s Distribution Adjustment Clause provision, the Company reconciles the actual base distribution revenue per customer (“RPC”) to the target RPC for all Residential and Small and Medium C&I firm rate classes. Under the RDM, customers included in the RDM are credited any net over-recovery and are surcharged for any net under-recovery through the Revenue Decoupling Adjustment (“RDA”) factor in the Company’s subsequent annual Distribution Adjustment Charge filing.

Therefore, incremental revenue based on billed revenue from new customers enabled by the Southern RI Project will differ from incremental revenue based on the target revenue as a function of the target RPC for a given year due to the timing of when the new customer is connected to the system and billing begins, the preparation and filing of the RDM reconciliation, and the subsequent billing of the RDA factor on the November 1 following the RDM filing. However, overall, the annual incremental base distribution revenue generated from each additional customer included in the RDM will be based on the target RPC from the Company’s annual RDM filings.

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The Company calculated an estimate of incremental annual distribution revenue in Attachment PUC 2-23 for each rate class for the new customers enabled by the Southern RI Project by multiplying the number of new customers per rate class by the corresponding RPC benchmark. The estimate does not take into consideration the point in time during the year the customer was connected to the system and treats all customers as if they were new on January 1 of each year, resulting in a full year of annual incremental revenue for each year presented.

Prepared by or under the supervision of:
Ryan Scheib and Thomas Dion

National Grid - RI Gas
FY2023 Gas Infrastructure, Safety, and Reliability Plan
Illustrative Calculation of Incremental Revenue

Line No.		CY2019 (a)	CY2020 (b)	CY2021 (c)
	<u>Residential Non-Heating</u>			
(1)	No. Customers Added	9	51	29
(2)	Cumulative No. Customers	9	60	89
(3)	Annual RPC	<u>\$274.44</u>	<u>\$283.14</u>	<u>\$285.13</u>
(4)	Incremental Revenue	\$2,470	\$16,988	\$25,377
	<u>Residential Non-Heating LI</u>			
(5)	No. Customers Added	1	2	0
(6)	Cumulative No. Customers	1	3	3
(7)	Annual RPC	<u>\$274.44</u>	<u>\$283.14</u>	<u>\$285.13</u>
(8)	Incremental Revenue	\$274	\$849	\$855
	<u>Residential Heating</u>			
(9)	No. Customers Added	148	436	613
(10)	Cumulative No. Customers	148	584	1197
(11)	Annual RPC	<u>\$628.73</u>	<u>\$648.92</u>	<u>\$654.82</u>
(12)	Incremental Revenue	\$93,052	\$378,969	\$783,820
	<u>Residential Heating LI</u>			
(13)	No. Customers Added	6	13	9
(14)	Cumulative No. Customers	6	19	28
(15)	Annual RPC	<u>\$628.73</u>	<u>\$648.92</u>	<u>\$654.82</u>
(16)	Incremental Revenue	\$3,772	\$12,329	\$18,335
	<u>Small C&I</u>			
(17)	No. Customers Added	41	76	67
(18)	Cumulative No. Customers	41	117	184
(19)	Annual RPC	<u>\$925.18</u>	<u>\$954.96</u>	<u>\$963.96</u>
(20)	Incremental Revenue	\$37,932	\$111,730	\$177,369
	<u>Medium C&I</u>			
(21)	No. Customers Added	3	8	9
(22)	Cumulative No. Customers	3	11	20
(23)	Annual RPC	<u>\$4,852.77</u>	<u>\$5,005.81</u>	<u>\$5,045.25</u>
(24)	Incremental Revenue	\$14,558	\$55,064	\$100,905
(24)	Total	\$152,060	\$575,931	\$1,106,660

PUC 2-24
Gas System Reliability – Gas Planning Program

Request:

Why is this a separate program, and what studies or analyses are the inputs to this program?

Response:

The Company's Long-Term Planning group sponsors two (2) programs: Gas System Reinforcement and Gas Planning. While both programs are commonly referred to as reliability work, there are differences in the objectives of the projects. Gas System Reinforcement projects, which fall into the Company's Growth classification, are designed to meet forecasted customer growth and ensure that minimum design pressures are maintained throughout the distribution system during periods of peak demand. Gas Planning projects, which fall into the Company's Reliability classification, are not driven by the customer growth forecast. These projects seek to improve the overall reliability of the distribution system, are not temperature dependent, and often include efforts to improve distribution system integration. For these reasons, the two (2) programs are separate.

An example of a Gas Planning project would be eliminating a single-feed distribution system by connecting it to a larger distribution system of the same Maximum Allowable Operating Pressure ("MAOP") or by replacing all the main in the single-feed system with main of the same MAOP of the upstream distribution system and then abandoning the regulator station. The Company's inventory of single-feed distribution systems and non-standard pressure distribution systems are direct inputs into the Gas Planning program.

PUC 2-25
Gas System Reliability – Gas Planning Program

Request:

Is the 2.6 miles of new gas main and abandonment of 0.1 mile of leak prone pipe described in the plan on Bates 62 related to system operations, integration of systems, or new supply sources?

Response:

1.4 miles of the new gas main and the abandonment of 0.1 mile of leak prone pipe is related to integration of systems. The remaining 1.2 miles of new gas main is related to system operations.

PUC 2-26
Gas System Reliability – Gas Planning Program

Request:

Does this planning process and the work associated with it effect how networked or sectionalized the distribution system is?

Response:

The work associated with the Gas Planning Program can affect how networked or sectionalized the distribution system is, such as when system reliability is improved by connecting two (2) distribution systems of the same MAOP. A more integrated network can help ensure continuous service to existing customers during abnormal operating conditions, such as third-party damage.

PUC 2-27
Gas System Reliability – Gas Planning Program

Request:

Does this planning process include reliability needs caused by system growth and/or demand growth?

Response:

The Gas Planning Program does not include reliability needs caused by system growth and/or demand growth. Please see the Company's response to PUC 2-24.

PUC 2-28
Instrumentation and Regulation (I&R) Reactive Program

Request:

Is this program planned and managed separately from the Pressure Regulating Facilities work described on Bates 60? If so, why?

Response:

Yes, the I&R Reactive Program is managed by the I&R Operations group and is managed separately from Pressure Regulating Facilities work. The I&R Reactive program is meant to address issues that are found during normal operations. The projects are normally smaller in scale than I&R Proactive projects.

PUC 2-29
Instrumentation and Regulation (I&R) Reactive Program

Request:

Regarding this program, Bates 62 of the Plan notes “Projects range from instrumentation replacement due to failure...” In terms of the budget and actual spending, is replacement for failure in this program managed separately from the Damage/Failure Program described on Bates 49? If so, why, and are their other programs with damage/failure work managed outside of the Damage/Failure Program?

Response:

Yes, I&R Reactive is managed separately from the Damage/Failure program. The I&R Reactive program is geared solely towards regulator station facilities. It is appropriate to manage this as a separate budget item since the work is specialized, and the Company typically experiences some failures annually and is better able to forecast spending. The Damage/Failure program budget is for unanticipated damages or failures to the gas system that are not funded through other reactive budget categories and for which there is no available history to forecast category specific damages and failures.

PUC 2-30
Proactive Low Pressure System Elimination

Request:

Is the low-pressure system already sectionalized so that it can be abandoned in sections, or must it be sectionalized as part of the planned work so that it can be abandoned, or will it only be abandoned when all customers have been transferred to the new high-pressure system?

Response:

The Tuckerman Avenue, Middletown Proactive Low Pressure System Elimination project is currently phased so that as each section is relayed with 99# main, and the associated customers are transferred over from the LP system to the 99# system. The LP mains within each scope can be abandoned prior to starting the subsequent phase.

PUC 2-31
Proactive Low Pressure System Elimination

Request:

Has National Grid considered any alternatives for removing customers from the low-pressure system in lieu of installing sections of new high-pressure main or in lieu of connecting all customers to the new high-pressure main?

Response:

For the ongoing (and future proposed) work on the Middletown LP system leading to the eventual abandonment of the Walcott Avenue near the Briarwood Avenue low pressure regulator station, relaying the existing low pressure mains with high pressure mains and upgrading the existing customers from low pressure services to high pressure services was found to be the most viable solution to enhance gas system safety and align with recommendations from Federal and State government agencies following the Columbia Gas incident in 2018. The Company will continue to evaluate all options, including decarbonized solutions, when scoping additional low pressure system elimination projects in the future.

PUC 2-32
Proactive Low Pressure System Elimination

Request:

How many customers, and of what class, are currently on the low-pressure system.

Response:

There are approximately 340 customers on the Middletown LP system. All are residential, except for 2 commercial customers. In total, there are approximately 138,000 LP customers in the state of Rhode Island.

PUC 2-33
Proactive Low Pressure System Elimination

Request:

Is any part of the low-pressure system outside of Middletown?

Response:

The current focus of the Proactive Low Pressure System Elimination program is the Middletown LP system, which is located entirely in the town of Middletown. This is a multiyear project, which began in FY22 and will continue to be the primary focus of this program in the short-term until all customers currently being serviced by this low-pressure system have been upgraded to high pressure, and the Walcott Ave near Briarwood Av LP regulator station is able to be abandoned. Across the state of Rhode Island, National Grid has approximately 1,095 miles of low pressure main in its gas distribution system. Once the Middletown LP system is retired, additional low-pressure systems will be evaluated for elimination in the future. In addition to the Proactive Low Pressure System Elimination program, when possible, low pressure mains are relayed with high pressure mains (and the existing customers upgraded from low pressure service to high pressure service) as a part of other ISR-funded programs.

PUC 2-34
Proactive Low Pressure System Elimination

Request:

Is any of the work proposed in the Valve Installation/Replacement program described on Bates 61 going to occur on any part of the low-pressure system?

Response:

No, none of the planned work proposed in the Valve Installation/Replacement program will be occur on the Middletown LP system.

PUC 2-35
Pipeline Integrity – Integrity Verification Program

Request:

Please provide a general description of this program and its purpose.

Response:

The Pipeline Integrity – Integrity Verification Program is intended to verify the documentation of a pipeline that is operating at 125 psig or greater based on condition, records quality, and operating history. When pipeline documentation cannot be verified, this program would prioritize and fund for in-situ (in place) testing, destructive testing, or replacement. The purpose of this program is to minimize any risk of operating pipelines above 125 psig.

PUC 2-36
Pipeline Integrity – Integrity Verification Program

Request:

How are projects categorized into this program? What planning or analyses result in a project that is categorized into this program?

Response:

Pipelines operating over 125 psig are evaluated based on multiple sources of information, such as data obtained from the Integrity Management Program (IMP), cathodic protection measurements, leak survey, third party damage, and records.

PUC 2-37
Pipeline Integrity – Integrity Verification Program

Request:

Why is this program classified as a Mandated Program?

Response:

Pipelines operating at 125 psig or greater are included in our IMP/IVP programs to verify that records are Traceable Verifiable and Complete (TVC). This policy is written to meet the requirements in accordance to 49 CFR 192.607.

PUC 2-38
Pipeline Integrity – Integrity Verification Program

Request:

Specifically, how and why was the Wampanoag Trail Pipeline Replacement Project categorized into this program?

Response:

The Wampanoag Trail Pipeline is categorized into this program in accordance with National Grid Gas Policy ENG03035 “Material Verification Policy for Legacy Pipelines Designed to Operate at or Above 125 psig.” The line has an MAOP of 200 psig.

This segment of main was installed prior to issuance of CFR part 192 in 1970, and may have been manufactured and constructed using materials and methods that have known threats, see CFR part 192.917. Additionally, it is common to see coating installed in this vintage deteriorate significantly.

Recent Direct Assessments inspections from the company's voluntary Integrity Management Program (“IMP”) program have shown significant coating deterioration and pitting of the main. The existing coating during recent direct assessment shows the coat to be thin and flakey, providing little cathodic protection. This condition of the coating has made the replacement of this segment a priority in this program.

PUC 2-39
System Automation

Request:

Is the work in this program only occurring at pressure regulating facilities? If not, please describe these other facilities that require system automation investments.

Response:

The work in this program is primarily performed at pressure regulating facilities but does not occur only at pressure regulating facilities. The other facilities are smaller critical pressure points on the SCADA system, which are usually “end-point” pressure monitoring boxes that ensure the pressure regulating facilities are providing a safe operating pressure at the system level.

PUC 2-40
System Automation

Request:

How many pressure regulating facilities currently have adequate system data and telemetry recording and system automation and control? How many will need work after the work is completed at the 20 stations described on Bates 56?

Response:

125 Stations currently have adequate data, monitoring capability, and remote control with other projects still in construction. The target is to have all the remaining 64 stations to have SCADA monitoring and recording as well as remote control for most stations depending on operational considerations. Approximately 50 stations will still require new SCADA installations following this year's work plan depending on other planned work such as pressure regulating station replacement projects and station abandonments.

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PUC 2-41
System Automation

Request:

Please briefly describe the telemetry and control investments.

Response:

Below is a table of the preliminary telemetry and control investments. A total of 16 potential station traffic boxes and five system monitoring points have been identified as needing replacement. Four of the station traffic boxes have been confirmed to include remote control, and gas control will make a decision with respect to the remaining 12.

Station Name	Station Number	Town	Remote Control
Pawtucket @ Waterman	RIS-015	East Providence	Yes
N Broadway @ S Greenwood	RIS-014	East Providence	Yes
Fort St @ S Broadway	RIS-123	East Providence	Yes
Village Green @ Pawtucket	RIS-130	East Providence	Yes
Maple @ Yarnell	RIS-N221	Middletown	TBD
3362 Kingstown Rd	RIS-118	North Kingstown	TBD
Fountain @ Dyer	RIS-077	Cranston	TBD
Wellington @ Well	RIS-119	Cranston	TBD
Carol @ Ocean	RIS-N219	Newport	TBD
Walcott Av @ St Georges	RIS-N209	Middletown	TBD
Dyer @ Pine	RIS-093	Providence	TBD
Memorial Blvd @ Anna Dr	RIS-N220	Newport	TBD
186 North Country Club Drive	RIS-035	Warwick	TBD
Warwick Ave @ West Shore	RIS-107	Warwick	TBD
Niantic Ave @ Pawnee	RIS-022	Providence	TBD
Chalkstone @ Rosebank	RIS-098	Providence	TBD
Rhodes @ Fourth	NA: Scada Point	Woonsocket	No
Adams @ Rathburn	NA: Scada Point	Woonsocket	No
Knollwood @ Walnut Hill	NA: Scada Point	Woonsocket	No
Logee @ Grove	NA: Scada Point	Woonsocket	No
Old Willis @ Ann St	NA: Scada Point	Cumberland	No

PUC 2-42
System Automation

Request:

Are the investments proposed in the program generally compatible with control room management and systems, or are they specifically compatible with National Grid's control room management and systems? Does National Grid know if the proposed investments are compatible with PPL's control room management and systems?

Response:

The investments proposed are generally compatible with control room management and systems.

PUC 2-43
System Automation

Request:

Are any of the 20 regulators proposed this year, or any of the regulators that may need system automation investments in futures years, also planned for work through the Pressure Regulating Facilities program described on Bates 60 or the Distribution Station Over Pressure Protection program described on Bates 62?

Response:

The system automation work plan is cross checked with the Pressure Regulating Facilities program to try and ensure there are no system automation projects performed at stations being replaced within the next two years. Over the next five years, there may be a few stations that overlap with system automation projects due to the fluidity of the station replacement plan as new risks emerge. If this occurs, the scope of the system automation project will change to a temporary solar powered temporary SCADA box if it is critical to have pressure monitoring. Distribution Station Over Pressure Protection and System Automation projects may occur at the same location but they serve independent purposes, and both programs are compared with the Pressure Regulating Facilities program.

PUC 2-44
Distribution Station Over Pressure Protection

Request:

Why is this program managed separately from the System Automation Program described on Bates 56?

Response:

Overpressure protection mitigates the risk of regulator station system failures that may lead to over-pressurization through mechanical means such as using override pilots, relief valves, and sense line headers. The work is performed and/or overseen by pressure regulation technicians. System Automation involves the use of electronic controls and telemetry equipment for performance monitoring of the stations and systems, remote control of the system to improve system balance and performance, as well as early detection of and response to system failures. This work is performed by instrumentation technicians/electricians. Therefore, since they serve separate purposes and are resourced differently, the programs are separate.

PUC 2-45
Distribution Station Over Pressure Protection

Request:

Why is the program managed separately from the Pressure Regulating Facilities described on Bates 60?

Response:

The Pressure Regulating Facilities program is used for a completely new regulator station replacement, station abandonment, or major reconfiguration of a station to address the combination of threats to regulator stations including age, condition, integrity, and performance while the overpressure protection program is used to specifically address overpressure risks such as mechanical failure and third-party damage with lower cost improvements. The only exception is the single valve bypass elimination effort, which could fall under either program, but the decision was to leave it consistent with previous years and keep it under pressure regulating facilities.

PUC 2-46
Distribution Station Over Pressure Protection

Request:

Will any of the proposed work described on Bates 63 increase system automation and control or data telemetry and recording?

Response:

As described in the Company's response to data request PUC 2-44, the programs serve independent purposes. In some instances, a telemetry point may be part of the installation, such as a relief valve, and would be included in the relief valve funding.

PUC 2-47
Valve Installation/Replacement

Request:

Can the valves that are being installed in the program permanently isolate sections of the system, for example to allow abandonment?

Response:

The valves that are being installed in the program in Newport are designed to improve the ability to sectionalize the low-pressure distribution system in the event of abnormal operations, such as when customer load shedding/curtailment is required. When necessary, this isolation would be temporary, the section would be purged back in, and service to customers would be restored. However, the valves could be used to permanently isolate sections for abandonment, where hydraulically feasible, but that is not a typical use for sectionalizing valves.

PUC 2-48
Valve Installation/Replacement

Request:

How does National Grid identify locations for new valve installations?

Response:

National Grid identifies locations for new valve installations based on several factors, including: the number of customers in an area; the customer load in an area; and the number of valves needed to isolate an area. The overall goal is to create isolation areas similar in size with regard to customer number using the fewest number of valves. National Grid utilizes existing valves where possible, then identifies strategic locations for additional valve installations. These locations are chosen to help standardize isolation area size for the purpose of service restoration and to minimize the number of valves that need to be turned during a response to an abnormal operating condition. Accessibility and ease of construction are also weighed when there are several potential valve locations. When a proposed location for a single valve installation is unavailable or undesirable, multiple installations in other locations may be needed to replace the single valve and maintain the desired isolation area size.

PUC 2-49
Valve Installation/Replacement

Request:

Has National Grid updated or reviewed its process for identifying locations for new valve installations in support of its System Reliability Procurement program plan?

Response:

No, the Company has not updated or reviewed its process for identifying locations for new valve installations in support of its System Reliability Procurement ("SRP") program as the Non-Pipeline Alternatives program is still in development in line with the development plan outlined in the 2021-2023 SRP Three-Year Plan.

PUC 2-50
Replace Pipe on Bridges

Request:

Why is replacing pipe on bridges a separate program, and is it managed separately from other mains replacement programs?

Response:

Yes, the Pipe on Bridges replacement program is managed separately from other main replacement programs. The program is managed separately because the design and construction of Pipe on Bridges, is, in most cases, complex in nature, and the permitting process is longer since requires review by state and town agencies. In addition, Pipe on Bridges projects are not prioritized using the same method as underground pipe.

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PUC 2-51
Growth

Request:

Footnote 10 on Bates 41 describes, “\$55.86 million is associated with projected growth and other non-ISR spending, which is not included for recovery in the FY 2023 Gas ISR Plan.” Please define “growth and other non-ISR spending” in this context.

Response:

Please see the table below for the categories of work included in the \$55.86 million associated with growth and other non-ISR spending, as described in footnote 10 on Bates page 41.

		Investment Name	\$(000)
Growth	Customer Connections	Customer Contributions	(832)
	Customer Connections	Fitting	1,019
	Customer Connections	Install Main	4,848
	Customer Connections	Install Meter/Regulator	527
	Customer Connections	Install Services	12,309
	Customer Connections	Meter Purchases	399
	System Reinforcement	Gas System Reinforcement	8,405
Growth Total			26,675
Mandated	Discretionary	Meter Changes	868
Reliability	Discretionary	LNG - Allen's Ave Sea Wall	19,900
Non Infrastructure	Discretionary	AMI	2,920
	Discretionary	Future of Heat - Clean Heat Initiative - Geo Thermal & Hydrogen Blending	2,000
	Discretionary	Aquidneck Island (Old Mil Lane)	1,000
	Discretionary	LNG - Cumberland Tank Replacement	2,500
Grand Total			\$ 55,862

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PUC 2-52
Growth

Request:

Reference is made to Comm 2-28 issued in Docket 4781. How was the \$55.86 million for projected growth spending calculated?

Please provide an updated table of National Grid’s response to Comm 2-28, but provide all years for which data exists.

Please include a brief description of each category of spending (i.e., the rows in the table).

Response:

Please see below for the requested updated table.

\$(000)	Investment Name		FY22 Budget	FY23	FY24	FY25	FY26	FY27
Growth	Customer Connections	Customer Contributions	(816)	(832)	(769)	(704)	(635)	(563)
	Customer Connections	Fitting	1,033	1,019	942	862	778	690
	Customer Connections	Install Main	4,753	4,848	4,481	4,098	3,698	3,280
	Customer Connections	Install Meter/Regulator	516	527	487	445	402	356
	Customer Connections	Install Services	12,067	12,309	11,378	10,405	9,388	8,327
	Customer Connections	Meter Purchases	1,105	399	407	415	423	432
	Customer Connections Total		\$ 18,659	\$ 18,270	\$ 16,926	\$ 15,522	\$ 14,054	\$ 12,522
	System Reinforcement	Gas System Reinforcement	\$ 8,000	\$ 8,405	\$ 8,200	\$ 7,321	\$ 6,443	\$ 5,564
Growth Total			\$ 26,659	\$ 26,675	\$ 25,126	\$ 22,843	\$ 20,497	\$ 18,086

Customer Connections involves the installation of new main, services and meters to serve projected customer growth in the Rhode Island gas territory.

Gas System Reinforcement: Each year, the Company performs an analysis on the Rhode Island gas distribution network to determine any reinforcement projects and associated costs that need to be constructed over the following five years in order to support forecasted customer growth. Reinforcement projects are designed to maintain minimum pressures throughout the distribution system under peak-hour conditions and are generally constructed as they become necessary. These projects ensure that continuous service is maintained to all customers on the gas distribution network throughout the year in compliance with federal and state codes.

PUC 2-53
Growth

Request:

Why is projected growth and other non-ISR spending increasing annually?

Response:

Please see the table below for detail on forecasted spending for the next five years in the growth and non-growth, non-ISR categories.

The Company forecasts that overall spending in the Growth categories will decrease over the next five years.

The Company forecasts that spending in the non-growth, non-ISR categories will experience an overall increase in the next five years. In FY 2023, the primary driver is the construction phase of the LNG – Allen's Sea Wall project. In FY 2024 and FY 2025, the Company forecasts that it will be in the construction phase for the Aquidneck Island – Old Mill Lane project. In FY 2027, the Company forecasts that costs will begin to increase for the LNG – Cumberland Tank Replacement project for site development and construction. Please note that the Aquidneck Island – Old Mill Lane and LNG – Cumberland Tank Replacement projects are currently classified as non-ISR, but the Company anticipates including those capital investments in future ISR Reconciliation filings, to be considered for reimbursement, once the assets are placed in service.

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Growth

\$(000)	Investment Categories		FY22 Budget	FY23	FY24	FY25	FY26	FY27
Growth	Customer Connections	Customer Contributions	(816)	(832)	(769)	(704)	(635)	(563)
		Fitting	1,033	1,019	942	862	778	690
		Install Main	4,753	4,848	4,481	4,098	3,698	3,280
		Install Meter/Regulator	516	527	487	445	402	356
		Install Services	12,067	12,309	11,378	10,405	9,388	8,327
		Meter Purchases	1,105	399	407	415	423	432
	Customer Connections Total		\$ 18,659	\$ 18,270	\$ 16,926	\$ 15,522	\$ 14,054	\$ 12,522
	System Reinforcement	Gas System Reinforcement	8,000	8,405	8,200	7,321	6,443	5,564
Growth Total			\$ 26,659	\$ 26,675	\$ 25,126	\$ 22,843	\$ 20,497	\$ 18,086
Mandated	Discretionary	Meter Changes	851	868	885	903	921	939
Reliability	Discretionary	LNG - Allen's Ave Sea Wall	6,767	19,900	430	0	0	0
Non Infrastructure	Discretionary	AMI	364	2,920	617	493	0	0
	Discretionary	Future of Heat - Clean Heat Initiative - Geo Thermal & Hydrogen Blending	1,000	2,000	2,040	2,081	4,000	4,080
	Discretionary	Aquidneck Island - Old Mill Lane	4,900	1,000	1,000	21,000	16,000	100
	Discretionary	LNG - Cumberland Tank Replacement	2,000	2,500	2,500	500	1,500	9,000
Non-Growth, Non-ISR Total			\$ 15,882	\$ 29,188	\$ 7,472	\$ 24,977	\$ 22,421	\$ 14,119
Grand Total			\$ 42,540	\$ 55,862	\$ 32,598	\$ 47,820	\$ 42,918	\$ 32,205